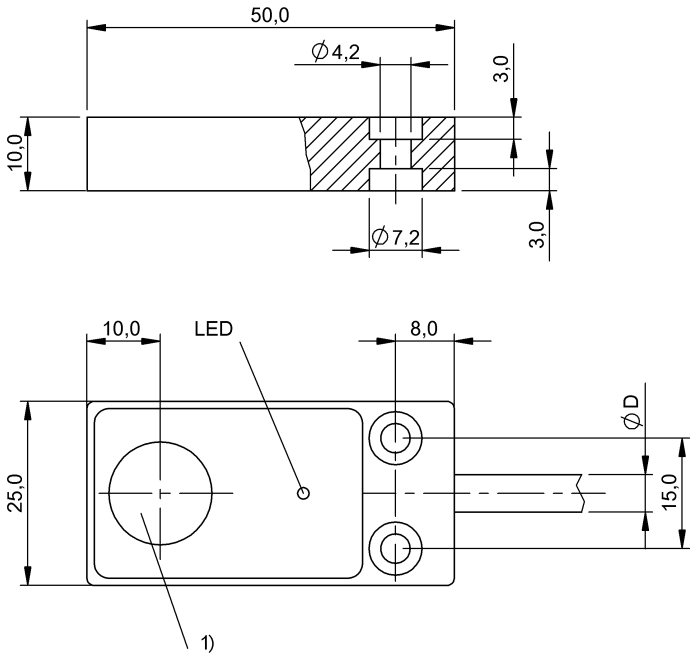
Inductive Sensors

# BES 516-133-MO-C-PU-04
# Order Code: BES017F




1) Sensing surface

## Basic features

| | |
|---|---|
| **Approval/Conformity** | CE<br>UKCA<br>WEEE |
| **Basic standard** | IEC 60947-5-2 |

## Display/Operation

| | |
|---|---|
| **Function indicator** | yes |
| **Power indicator** | no |

## Electrical connection

| | |
|---|---|
| **Cable diameter D** | 4.60 mm |
| **Cable length L** | 4 m |
| **Conductor cross-section** | 0.25 mm² |
| **Connection type** | Cable, 4.00 m, PUR |
| **Number of conductors** | 4 |
| **Polarity reversal protected** | yes |
| **Protection against device mix-ups** | yes |
| **Short-circuit protection** | yes |

## Electrical data

| | |
|---|---|
| **Load capacitance max. at Ue** | 1 µF |
| **Min. operating current Im** | 0 mA |
| **No-load current Io max., damped** | 32 mA |
| **No-load current Io max., undamped** | 20 mA |
| **Operating voltage Ub** | 10...30 VDC |
| **Output resistance Ra** | 2.2 kOhm + D + LED/4.7 kOhm + D |
| **Rated insulation voltage Ui** | 75 V DC |
| **Rated operating current Ie** | 200 mA |
| **Rated operating voltage Ue DC** | 24 V |
| **Rated short circuit current** | 100 A |
| **Ready delay tv max.** | 60 ms |
| **Residual current Ir max.** | 80 µA |
| **Ripple max. (% of Ue)** | 15 % |
| **Switching frequency** | 500 Hz |
| **Utilization category** | DC -13 |
| **Voltage drop static max.** | 2.5 V |

Inductive Sensors

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## Environmental conditions

| | |
|---|---|
| **Ambient temperature** | -25...70 °C |
| **Contamination scale** | 3 |
| **EN 60068-2-27, Shock** | Half-sinus, 30 $g_n$, 11 ms |
| **EN 60068-2-6, Vibration** | 55 Hz, amplitude 1 mm, 3x30 min |
| **IP rating** | IP67 |

## Functional safety

| | |
|---|---|
| **MTTF (40 °C)** | 1015 a |

## Interface

| | |
|---|---|
| **Switching output** | PNP normally open/normally closed (NO/NC) |

## Material

| | |
|---|---|
| **Housing material** | Aluminium |
| **Material jacket** | PUR |
| **Material sensing surface** | PBT |

## Mechanical data

| | |
|---|---|
| **Dimension** | 50 x 25 x 10 mm |
| **Installation** | for flush mounting |

## Range/Distance

| | |
|---|---|
| **Assured operating distance Sa** | 4 mm |
| **Hysteresis H max. (% of Sr)** | 15.0 % |
| **Rated operating distance Sn** | 5 mm |
| **Real switching distance sr** | 5 mm |
| **Repeat accuracy max. (% of Sr)** | 5.0 % |
| **Temperature drift max. (% of Sr)** | 10 % |
| **Tolerance Sr** | ±10 % |

## Remarks

The sensor is functional again after the overload has been eliminated.

For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

## Wiring Diagrams

